

REMARKS

Applicant has amended claims 1, 11 and 12 to more clearly point out his invention. Applicant also has added new claims 13 and 14 to claim specific embodiments of his invention. These amendments are not the addition of new matter. Accordingly, Applicant respectfully ask that the Examiner enter the amendments.

Applicant respectfully traverses the rejection of claims 1 – 12 under 35 U.S.C. 112, second paragraph.

Applicant has amended claims 1 and 11 – 12 to correct any indefiniteness that may have existed. The terms “relatively” and “about” have been deleted. Claim 1, for example, now recites a low pressure below 8 millitorr.

Accordingly, Applicant respectfully ask that the Examiner withdraw this rejection.

Applicant respectfully traverses the rejection of claims 1 – 12 under 35 U.S.C. §103(a) over U.S. Patent No. 5,879,532 to Foster in view of U.S. Patent No. 6,196,936 to Meckel in view of U.S. Patent No. 6,170,487 to Ishiguro and in view of U.S. Patent No. 6,154,311 to Simmons, Jr.

Claims 1 – 14, as amended, patentably distinguish over the combination of four references in the recitation of a color layer vapor deposited at a low pressure of below 8 millitorr.

The claims further patentably distinguish over the four references in the recitation of a color layer comprised of reaction products of refractory metal or

refractory metal alloy, nitrogen and oxygen, wherein the total nitrogen and oxygen content of the reaction products is from 4 to 32 atomic percent with the nitrogen content being at least 3 atomic percent.

The claims further patentably distinguish over the four references in the recitation of the color layer having a structure comprised of (1) amorphous metallic refractory metal with oriented, textured nano-sized grains of a metal nitride or (2) oriented textured, nano-sized grains of metallic refractory metal.

The claims still further patentably distinguish over the four references in the recitation of the color layer being deposited on the polymer layer.

The claims still further patentably distinguish over the four references in the recitation of the color layer having the appearance of stainless steel.

Nowhere do Foster, Meckel, Ishiguro and Simmons disclose or suggest these elements, let alone suggest the combination of these elements.

Foster fails to mention varying the nitrogen and oxygen content of the reaction products. Foster also fails to mention varying the content to give the color layer the appearance of stainless steel or brushed stainless steel finish. Neither does Foster disclose or suggest a polymer layer. Nor does Foster disclose or suggest that the color layer has a structure comprised of (1) amorphous metallic refractory metal with a textured metal nitride or (2) a textured metallic refractory metal. Nor does Foster disclose or suggest the oriented, nano-sized grains Applicant claims.

Clearly, the reference is deficient.

Meckel does not disclose a stainless steel color. Nor does Meckel mention the nitrogen content of the refractory metal nitrides or the nitrogen content of the refractory metal alloy nitride. The Examiner argues that silver and gray are essentially the same as stainless steel. The Examiner also argues that the nitrides of Meckel appear to contain about 5 to about 28 atomic percent nitrogen. Applicant respectfully submits that the Examiner has submitted no evidence to support his arguments.

In addition, Meckel fails to suggest that the color layer has a structure comprised of (1) amorphous metallic refractory metal with a textured metal nitride or (2) a textured metallic refractory metal. Nor does Meckel disclose or suggest the oriented, nano-sized grains Applicant claims.

Clearly, Meckel is deficient.

The Examiner states that Ishiguro discloses that titanium oxide is generally white in color, but when oxygen is partially lost the color changes to gray or black.

Applicant respectfully submits that Ishiguro is nonanalogous art. Ishiguro discloses a health support device having a semiconductor film on a surface of a partially-reduced sintered material of titanium oxide. At best, the titanium oxide is a mixture of oxides. The reaction products of Applicant claims, for example comprise zirconium oxide, zirconium nitride and zirconium oxy-nitride. Applicants respectfully submits that one could not predict the color of a mixture including nitrides and oxy-nitrides from a mixture of oxides. No basis in fact or theory supports such a conclusion.

Regarding Ishiguro, the Examiner also argues that gray and stainless steel colors are essentially the same. Applicant respectfully submits that the Examiner has submitted no evidence to support this position.

Foster and Meckel are deficient and Ishiguro does not supply those deficiencies.

Nowhere do any of the references disclose that the amount of nitrogen and oxygen produces a stainless steel colored coating with two types of structures: (1) mainly amorphous metallic refractory metal with textured metal nitride phase with nano-sized crystal grains preferentially oriented in a certain direction, and (2) highly textured nano-size grains of the metallic refractory metal preferentially oriented in a certain direction.

Simmons is nonanalogous art and does not apply to an article having a color layer thereon. The invention of Simmons relates to a transparent zero distortion photocatalytic dielectric combined housing having a series of light transmission films thereon.

Simmons does not provide the motivation to modify Foster. Simmons discloses transparent layers, not colored layers. Simmons layers are transparent photocatalytic dielectrics used in light fixtures.

Further, Simmons does not supply the deficiencies of Foster, Meckel and Ishiguro. For example, the slightly nitrided and oxidized color layer is mainly comprised of amorphous metallic refractory metal with textured metal nitride phase. For example, zirconium nitride oriented in plane and smaller than 50 nm in grain size, or metallic zirconium oriented in plane and smaller than 80 nm.

Clearly, the amended claims recite structure not disclose or suggested by the prior art.

Accordingly, Applicants respectfully ask that the Examiner withdraw this rejection under 35 U.S.C. §103.

Applicant also respectfully traverses the rejection of claims 1 – 12 under 35 U.S.C. §103(a) over U.S. Patent No. 5,879,532 to Foster in view of U.S. Patent No. 6,196,936 to Meckel in view of U.S. Patent No. 6,170,487 to Ishiguro and in view U.S. Patent No. 6,168,242 to Mokerji.

The deficiencies of Foster, Meckel and Ishiguro in rendering obvious the instant claims have been discussed above and, for the sake of brevity, will not be further repeated herein.

The Examiner states that Mokerji discloses the deposition of a polymer leveling layer on metal substrates to level the surface of the substrate to cover any scratches or imperfections in the surface, and provide a smooth and even surface for the deposition of the following layer, such as a chrome layer.

While Mokerji discloses a polymer layer, Mokerji does not supply the deficiencies of the Foster, Meckel and Ishiguro.

That the elements might be individually located in various prior art disclosures cannot automatically lead to a conclusion that the elements ought to be combined in the manner claimed without a showing of motivation in the art in support of the specific combination.

While Mokerji discloses a polymer layer, Mokerji does not supply the deficiencies of the Foster, Meckel and Ishiguro.

That the elements might be individually located in various prior art disclosures cannot automatically lead to a conclusion that the elements ought to be combined in the manner claimed without a showing of motivation in the art in support of the specific combination.

Mokerji discloses a polymer layer but does not disclose or suggest the color layer Applicant claims.

Clearly, the amended claims recite structure not disclosed or suggested by the prior art.

Accordingly, Applicant respectfully asks that the Examiner withdraw this rejection under 35 U.S.C. §103.

Therefore, Applicants respectfully submit that claims 1 – 14 as amended are in condition for allowance and respectfully ask that the Examiner pass the claims to issue.

Respectfully submitted,

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